URGWOM Technical Team
Spring 2026 Field Trip
Wrap-Up Report
April 6, 2026

This is the wrap-up Report summarizing the sites visited and information obtained during the March 31, 2026 URGWOM Technical Team Field Trip. The itinerary of the Technical Team trip is shown below:

Stop No.	Location	Approximate time Arrive	Depart	Subject of site inspection
1	NMRX SF County/NM 599 Train Station	8:45	9:00	Rendezvous Location
2	USGS gaging station Rio Grande at Embudo	10:20	10:50	Historic site and stream gage
3	Velarde Community Ditch Project - Lyden Ditch headgate	11:00	11:30	Irrigation structures along Rio Grande constructed by Reclamation in Velarde Valley
4	NMSU Alcalde Sustainable Agricultural Science Center	11:40	12:40	Site of weather station and crop yield research programs
5	USGS stream gage Rio Chama nr. Chamita	12:55	1:05	USGS stream gage used in Abiquiu Dam operations
6	Rio Chama sediment plug (NM 233 Bridge)	1:15	1:45	Site of sediment deposition in channel of Rio Chama
7	Acequia Salazar diversion structure	2:15	3:00	Senior water right point of diversion on Rio Chama
8	USGS stream gage Rio Grande at Otowi	3:50	4:20	Rio Grande Compact index gage
9	NMRX SF County/NM 599 Train Station	5:00		Return to Rendezvous Location

The list of Technical Team members participating in the trip is shown in the following table:

Name	Affiliation
Betsy Summers	USACE, Albuquerque District
Reynalden Delgarito	USACE, Albuquerque District
Prakash Kaini	USACE, Albuquerque District
Carolyn Donnelly	Bureau of Reclamation, Albuquerque Area Office
Lucas Barrett	Bureau of Reclamation, Albuquerque Area Office
Stephanie Roussel	USGS NM Water Science Center
Andre Ritchie	USGS NM Water Science Center
Jeb Brown	USGS NM Water Science Center
Jade Allen	NMOSE/NMISC
Cindy Stokes	NMOSE/NMISC
Yining Bai	NMOSE/NMISC
Lynette Giesen	NMOSE/NMISC
Desiree Loggins	UNM
Stephanie Mladinich	UNM
Doug Wolf	Wolf Engineerins / SWD
William Miller	WJM Engineers / SWD

The purpose of the trip was to gather information about water use in the Espanola Valley and the lower Rio Chama Valley with application in URGWOM. These areas are currently simulated in the model; the Rio Chama agricultural consumptive use is based on authorized diversion rates or historic records of diversion and assumed return flow and the Velarde area agricultural consumptive use is considered part of the local inflow computation. The reliability of the model might be improved if these agricultural consumptive use values are based on actual climate data, measured irrigated acreage, the computation of crop ET using the Hargreaves Samani method and the application of the FAO-56 crop coefficients.

1. USGS Gage Rio Grande at Embudo

This gage was established in 1889 as the location of a camp to train engineers in the principles of streamflow measurement for the newly formed Irrigation Service. Refer to U.S.G.S. Professional Paper 778 for additional historical information.

The location of this streamgage is an URGWOM reach boundary which measures nearly all of the runoff originating in the San Juan and Sangre de Cristo Mountains. Discharge at the time of the inspection was about 250 cfs.

Figure 1. USGS gage Rio Grande at Embudo site

2. Lyden Community Ditch Headgate – Leyden

This site is one of several irrigation works projects constructed by Reclamation in the Velarde Valley beginning in 1980. It is a component of a Project that includes the construction of seven diversion structures serving nine Acequias delivering water to about 3,800 acres of irrigated land between Velarde and Ohkay Owingeh. The works include diversion dams, gates, siphons, flumes and concrete ditch lining. The concrete gate structure and concrete lined canal at the site of this stop were in good condition.

There are no measuring devices on irrigation canals and no NMOSE hydrographic survey of areas in Velarde Valley.

3. NMSU Sustainable Agricultural Science Center

The Team met with Dr. Saeid Zehtab Salmasi (Director) and David Archuleta (Farm Manager). Dr. Salmasi led a slide presentation and discussion on the operation and research activities at the Science Center. The Center operations include six acres of organic farm that supports research in the production of fruit cultivars, saffron, chickpeas, hemp, osha, yerba masa and lavender.

The weather station operated and maintained by Science Center collects daily maximum and minimum air temperature and precipitation. These data are used for the computation of crop and riparian vegetation consumptive use.

The Science center is experimenting with no-till soil agricultural practices, development of fruit tree stock suitable for the area and the use of hoop houses to protect against loss of fruit blossoms due to subfreezing air temperatures. Acequia water is delivered to the crops and orchards at the Center utilizing a sand filter system upstream of the drip or micro sprinkler emitters.

4. USGS Stream Gage Rio Chama at Chamita

This stream gage is located where NM State Highway 74 Bridge crosses the Rio Chama. The location of this stream gage is an URGWOM reach boundary. This gage measures the discharge of the Rio Chama into the Rio Grande and when combined with the discharge of the Acequia de Chamita (authorized diversion rate = 18 cfs) and the Acequia Hernandez (authorized diversion rate = 16 cfs), provides the total discharge at this cross section. The flow of the Rio Chama at the Chamita gage at the time of the inspection was approximately 430 cfs.

The Team did not stop here, but this site was a "drive-by" inspection because of the difficult foot access and heavy vehicle traffic.

5. Rio Chama Channel Sediment Plug

The Team inspected the Rio Chama channel at the NM 233 Bridge where excavated sediment deposited in the channel following a June, 2024 cloudburst has been spoiled on the south bank. Cindy Stokes described the NMISC's efforts to remove the sediment and the related issues such as access and permit conditions (e.g., CWA Section 404, FEMA). Mechanical removal of the deposited sediment was performed by the Bureau of Reclamation and administrative assistance was provided by the Albuquerque Water Utility. The cost of the sediment removal has exceeded $750,000 so far. Much of the excavated sediment remains along the riverbanks and will eventually move down stream.

Cindy also described an NMISC effort to collect data to construct a hydraulic model of the river channel and overbank floodplain. This model could be used in the monitoring of sediment and water in this reach of the lower Rio Chama.

6. Acequia Salazar diversion dam

The Team met with Rick Martinez, commissioner, and the Mayordomo Miguel, at the Acequia Salazar diversion on the Rio Chama in Medanales. This diversion dam is a weir that spans the channel and is constructed of treated wooden poles bolted together. The headgate structure is reinforced concrete located on the south bank that includes steel headgates and a sluice gate. This Acequia serves about 465 acres of irrigated land with an early water right priority date of 1600.

Figure 2. Acequia Salazar diversion dam on Rio Chama

Mr. Martinez described the operation and administration of the water diverted by the Acequia. Tailwater from the Salazar Acequia reaches the Los Vigiles Acequia in Espanola; the Los Vigiles Acequia can no longer divert from the Rio Grande because of a degraded river channel. Mr. Martinez also described the administration of all Rio Chama Acequia water right diversions by the Watermaster including the distribution of water based on an agreed upon sharing schedule during times of shortage.

The Team also inspected the recently constructed water measuring station on the Acequia downstream of the headgate. This station consists of a concrete flume section and overhead stage/velocity sensor.

Figure 3. Gage on Acequia Salazar

7. Rio Grande at Otowi Bridge

The Team visited this gage located immediately downstream of the NM State Highway 502 Bridge crossing the Rio Grande. This is the Ro Grande Compact New Mexico Index Gage and is also and URGWOM reach boundary. This station measures the flow of the Rio Grande entering the middle Rio Grande Valley. The flow of the Rio Grande at the Otowi Bridge gage at the time of the inspection was approximately 700 cfs. Figure 4 is a photo of the Rio Grande at Otowi stream gage.

Jeb Brown reported to the Team on the data collected at this site (stage and suspended sediment). He also described the equipment and methods used by the USGS to collect data at this site and the impact of material deposited in the Rio Grande channel from the Los Alamos Arroyo, just downstream of the gage site. This material deposited at the mouth of the Arroyo acts as a control section for the stream gage.

Figure 4. USGS stream gage Rio Grande at Otowi Bridge